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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/721,875

11/26/2003

Takaaki Endo

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6094

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7590

12/27/2007

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EXAMINER

LIEW, ALEX KOK SOON

ART UNIT

PAPER NUMBER

2624

MAIL DATE

DELIVERY MODE

12/27/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/721,875	Applicant(s) ENDO ET AL.	
	Examiner Alex Liew	Art Unit 2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 September 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2,3,7,8 and 10-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 10-13 is/are allowed.
- 6) ☒ Claim(s) 2,3,7 and 8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

The amendment filed on September 21, 2007 is entered and made of record.

Response to Applicant's Argument

On page 11, the applicants stated: [... Applicants, submit that nothing in the result of that combination would teach or suggest "generating the panoramic image by composing the converted first image and the converted second image without the reference image,"] where the 'combination' is Xiong (US pat no 6,754,379) in view of Duiker (US pat no 6,983,082).

The examiner disagrees, however in an updated search/consideration the examiner found Xiong (US pat no 6,754,379) in view of Sakai (US pub no 2003/0021462) which read better on the amended claims.

Xiong discloses an image processing method for generating a panoramic image by compositing first and second images comprising acquiring the first and second images and a reference image which has overlapping portions with both of the first and second images (see figure 1a, where the first and second images are those that overlaps with each other and with reference, example is shown in figure 11a, where the reference image is image N, the first and second are image 1 and image N – 1, respectively), which addresses applicant argument on page 10: [... to adjust a hue or brightness level of the first/second image to a hue or brightness level not of the second/first image but the reference image, which is not included in the generated panoramic image.] Also Xiong discusses while blending the panoramic images together, adjusting the intensity

of the images so all the images has uniform pixel intensities (see column 16 lines 19 – 24), which suggests the use of a reference image or reference map.

Xiong also discloses generating the panoramic image by compositing an image obtained by from acquiring first and second means (see figure 1b, shows the final composite image after combining / stitching plurality of panoramic images, the combining of images are done by blending shown in figure 3).

Sakai discloses calculating a first conversion condition required to adjust a brightness level of the first image to a brightness level of the reference image (see paragraph 12, lines 10 to 18). It is obvious that one would perform N brightness conversion on other images in Xiong, figure 11a, because to obtain uniform brightness in the final blend panoramic image, as suggested by Xiong. One skilled in the art would include using a reference image for brightness conversion because the system does not have to determine brightness on adjacent images one by one and the plurality of images taken does not guarantee to have uniform brightness, so having a reference image, all other images may be refer to this reference for more accurate brightness conversion.

Allowable Claims

Claims 10 – 13 are allowable.

With regards to claim 10, the examiner cannot find applicable prior art and / or suggestion disclosing conversions based on the first and second conversion conditions

are weighted depending on distances from right and left ends of the first image in combination with the rest of the limitations of claim 10.

With regards to claims 12 and 13, see the rationale and rejection for claim 10.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 2, 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Xiong ('379) in view Sakai ('462).

With regards to claim 2, Xiong discloses an image processing method for generating a panoramic image by compositing first and second images comprising acquiring the first and second images and a reference image which has overlapping portions with both of the first and second images (see figure 1a, where the first and second images are those that overlaps with each other and with reference, example is shown in figure 1.1a, where the reference image is image N, the first and second are image 1 and image N – 1, respectively), generating the panoramic image by compositing an image obtained by from acquiring first and second means (see figure 1b, shows the final composite image

after combining / stitching plurality of panoramic images, the combining of images are done by blending shown in figure 3). Also Xiong discusses while blending the panoramic images together, adjusting the intensity of the images so all the images has uniform pixel intensities (see column 16 lines 19 – 24), which suggests the use of a reference image or reference map. Xiong does not disclose a first conversion condition required to adjust a brightness level of the first image to a brightness level of the reference image.

Sakai discloses calculating a first conversion condition required to adjust a brightness level of the first image to a brightness level of the reference image (see paragraph 12, lines 10 to 18). It is obvious that one would perform N brightness conversion on other images in Xiong, figure 11a, because to obtain uniform brightness in the final blend panoramic image, as suggested by Xiong. One skilled in the art would include using a reference image for brightness conversion because the system does not have to determine brightness on adjacent images one by one and the plurality of images taken does not guarantee to have uniform brightness, so having a reference image, all other images may be refer to this reference for more accurate brightness conversion.

With regards to claims 7 and 8, see the rationale and rejection for claim 2.

3. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Xiong ('379) in view Sakai ('462) as applied to claim 2 further in view of official notice (MPEP 2144.03).

With regards to claim 3, Xiong and Duiker disclose all the limitations discussed in claim 1, but do not explicitly disclose taking the all panoramic images at the same time. However, it is well known in the art to image panoramic / stereoscopic images at the same time (MPEP 2144.03). One skill in the art would include a step capturing panoramic images at the same time because to increase flexibility of the imaging system to capture the dynamics of the scene where people are within the images.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alex Liew whose telephone number is (571)272-8623. The examiner can normally be reached on 9:30AM - 7:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Bella can be reached on (571) 272-7778. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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12/21/07


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